

NASCIMBENE et al.  
Appl. No. 10/525,645  
February 21, 2006

**AMENDMENTS TO THE ABSTRACT:**

Please replace the originally-filed Abstract with the attached.

Abstract:

The present invention relates to planning and optimizing the network transport infrastructure of a mobile telecommunication network by combining point-to-point (PTP) and point-to-multipoint (PTMP) microwave links in the transport network and utilizing the frequency capacity within the network in an efficient manner. The optimization relates to improving system quality associated with frequency reuse. In one embodiment, Radio Base Stations (RBSs) sites are connected to a switch site by a combination of fiber optics, leased lines, or preferably microwave radio links. Traffic from several RBS sites is concentrated at selected BSC/RNC hub sites. Quality degradation that may be experienced due to excessive interference inside a certain portion of the point-to-multipoint sector is minimized by a particular point-to-multipoint and point-to-point combination. If an RBS will experience excessive interference directly in the PTMP hub direction, the RBS is indirectly connected to the PTMP hub through a PTP link. Those calls requiring higher capacity can utilize the same spectrum within the PTMP frequency block allowing a frequency reuse factor of one.